

REQUEST FOR PROPOSALS

for Energy Performance Contracting Services

for

Town of Crested Butte

May 1, 2006

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REQUEST FOR PROPOSALS

Energy Performance Contracting Services for Town of Crested Butte

SUBMITTAL INFORMATION

Due Date:

- Proposals must be *received* at the below address on or before June 9, 2006 by 5:00 p.m.
- Late proposals will not be accepted.

Proposal

- Prepare responses to “ESCO Profile & Approach to Project” (see below).
- Submit quantity: Three (3) including original. **(One additional copy to be presented on CD.)**
- Clearly mark one proposal as **“ORIGINAL”**.
- Submit Sample Technical Energy Audit:
 - Submit quantity: 1 (under separate cover)

Delivery

- Postal Address: To: Town of Crested Butte; Attention: John Hess, P.O. Box 39, Crested Butte, CO 81224
- Overnight or hand-delivery: To: Town of Crested Butte; Attention: John Hess, 507 Maroon Avenue, Crested Butte, CO 81224

INSTRUCTIONS AND ADMINISTRATIVE INFORMATION

Schedule of Activities		Deadline (MST)
1.	RFP Published	May 1, 2006
2.	Site Visit	May 22, 2006
3.	Prospective bidder's written inquiries	May 26, 2006
4.	Responses to Inquiries	May 29, 2006
5.	Proposal Submission	June 9, 2006
6.	Interviews	June 14, 2006
7.	Announcement of Award	June 14, 2006

Process

RFP Phase

Site Visit. A site meeting and tour of the facilities will be held prior to the proposal due date. The site visit is optional for all Contractors who will later submit a proposal. No follow-up tours, additional access to buildings, or alternative dates for tours will be allowed unless offered to all respondents.

DATE: May 22, 2006

TIME: 10:00 a.m. to 4:00 p.m

LOCATION:

Building name. Town Hall, Town Council Meeting Room,

Physical address 507 Maroon Ave., Crested Butte CO 81224

Directions Turn west on Elk Ave. from State Highway 135, turn right on Fifth St., continue one block to Town Hall.

Review of Written Proposals. Proposals must be prepared as described in **Attachment C: Contractor Response**. Proposers within the competitive range will be invited to participate in the interviews.

Interviews. Interviews will provide an opportunity for clarification of the written proposal. Contractor representatives at the interview should include individuals who will be *key* points of contact and have *major* responsibility for contract negotiation, engineering and design, construction management and follow-up monitoring. Each interview may be tape-recorded. Scores from the written proposal will be modified based on clarifications and the top-ranking Contractor will be considered for award.

Final Selection. Final reference checks will be conducted with the apparent awardee (top-ranked Contractor) prior to making the final selection. An award will be made to the selected Contractor.

Technical Energy Audit and Project Proposal Phase

Technical Energy Audit and Project Proposal Contract. A Technical Energy Audit and Project Proposal Contract will be negotiated as presented in **Attachment F: Model Technical Energy Audit and Project Proposal Contract** (also see **Attachment A: Special Contract Terms and Conditions**).

Construction/Implementation/Commissioning and Financing Phase

Energy Performance Contract. Following successful completion and acceptance of the Technical Energy Audit and Project Development Contract, an Energy Performance Contract will be negotiated to implement the projects, as given in **Attachment G: Model Energy Performance Contract** (also see **Attachment A: Special Contract Terms and Conditions**). Any or all performance contract agreements may be denied.

Financing Agreement. The Contractor will solicit bids from a minimum of three financing companies, prior to negotiation of the energy performance contract, using the bid documents in **Attachment H: Financing Bid Package**. Agency will make the final selection.

OVERVIEW

The Town of Crested Butte (hereinafter referred to as **Agency**) seeks proposals from Energy Services Companies (Contractor) to conduct a technical energy audit of facilities and implement an Energy Performance Contract. The Contractor will identify and implement building improvements to reduce energy and related costs in facilities, such that annual cost savings are applied to annual payments for improvements.

The contracting process has three phases:

- **Technical Energy Audit and Project Proposal Phase:** A contract for the Technical Energy Audit will be developed with the selected Contractor. This investment grade audit will identify and evaluate cost-saving measures and define the proposed project scope, cost, savings and cash-flow over the proposed financing term. A project proposal will present aggregated measures that can be financed through guaranteed savings.
- **Construction/Implementation/Commissioning and Financing Phase:** An Energy Performance Contract will be negotiated following the audit. This establishes the project scope and costs, and provides for construction and follow-up services to be provided during the financing term. A separate financing agreement will be developed.
- **Post-Construction Guarantee/Monitoring Phase:** After construction, the Contractor will offer a variety of services to ensure savings are met, such as a savings guarantee, staff training, follow-up monitoring, and contract maintenance services.

STATEMENT OF WORK

Contractor Services

Contractor must have the demonstrated capability in engineering and management to provide a broad range of services. Services may include but are not limited to the following:

Technical Energy Audit and Project Proposal Phase

- technical energy audit to evaluate costs and savings of a variety of energy and water-saving measures
- project proposal including financial analysis
- benchmarking using Energy Star tools
- monitoring and verification plan

Construction/Implementation/Commissioning and Financing Phase

- engineering design
- equipment procurement and purchasing
- construction management
- hazardous waste disposal or recycling
- ability to arrange financing
- commissioning

Guarantee/Monitoring Phase

- continuing operations and maintenance for all improvements
- staff training on routine maintenance and operation of systems
- training of occupants
- guarantee of performance and cost savings for the entire term of the contract
- monitoring and verification for measurement and reporting of the performance and savings
- provide for independent review of monitoring & verification (guaranteed savings pay for independent Contractor)
- analysis and application for Energy Star Label and/or LEED-EB (Leadership in Energy and Environmental Design for Existing Buildings, by the US Green Building Council)
- monitoring and reporting of emissions reductions
- maintaining long-term, high-efficiency performance of buildings

CONTRACTOR must have the technical capability to address a broad range of systems including, but not limited to:

- Mechanical Systems. Heating, ventilating and air conditioning (HVAC) systems, energy management and control systems, domestic hot water systems, distribution systems, etc.
- Plants. Distribution systems, cogeneration systems, etc.
- Lighting systems. Indoor and outdoor lighting systems, lighting controls, daylighting strategies.
- Building envelope systems. Windows, insulation, weatherization, etc. (It is recognized that window replacements are rarely cost-effective, but could be considered as part of a comprehensive plan.)
- Specialty Systems: laundry equipment, kitchen equipment, pool systems, renewable energy systems.
- Water and Sewage Systems. automatic controls, low-flow faucet aerators, low-flow toilets, cooling tower modifications, pool covers, and irrigation system controls or modifications.
- Desired projects.

- Lighting upgrades in most buildings
- Boiler replacement in Town Hall
- Replace controls in Town Hall
- Upgrade boiler controls in Marshall' Office/KBUT
- Recommission boilers and air handling equipment in some buildings
- Install programmable thermostats in 308 3rd, Old Town Hall, and Dyer Shop
- Investigate window and insulation improvements at the Town Hall

Standardized Process

- Rebuild Colorado Support: Agency has requested the support of Rebuild Colorado in this project. The Rebuild Colorado program of the Governor's Office of Energy Management and Conservation will work with Agency in all phases of the performance contracting process, providing the following assistance in: developing a performance contracting project, developing and negotiating the audit contract, reviewing the technical audit report regarding cost and energy savings estimates, reviewing and advising on the monitoring and verification plan, developing the performance contract and providing negotiating assistance, and providing on-going support.
- Standardized documents: Procurement and contracting documents and processes have been developed for use by Colorado state and local governments, as developed by the Governor's Office of Energy Management and Conservation, the Department of Personnel and Administration's State Buildings and Real Estate Programs, the Office of Attorney General, and other state department specialists.

Buildings, Facilities and Approach

All facilities owned, managed or operated by Agency at any time during the term of the performance contract will be considered for this work. Specific facilities now operated by Agency are listed in **Attachment E: Technical Facility Profile**. Additional facilities not yet identified that are under the jurisdiction of the Agency at any time during the term of the performance contract can be included in the scope of work in a contract amendment.

Work may be conducted in phases where the detailed scope of work can be developed at any time during the term of the performance contract.

The performance contract can be amended at any time during the initial performance contract term to address other buildings or new projects.

Agency reserves the right to reduce the scope of work, to conduct the work in phases or to segment work in facilities based on technological improvements.

ATTACHMENT A: SPECIAL CONTRACT TERMS AND CONDITIONS

Contract Documents. The **Model Technical Energy Audit & Project Proposal Contract (F)** and the **Model Energy Performance Contract (Attachment G)** will be used.

Payment for Audit. As given in the **Model Technical Energy Audit & Project Proposal Contract (Attachment F)**:

Agency shall have no payment obligations under this contract provided that CONTRACTOR and Agency execute an Energy Performance Contract within 90 days, or such longer period as the parties may mutually agree, after submission and acceptance by Principal Representative of the final Technical Energy Audit report and Project Development Proposal by CONTRACTOR to Agency.

Should the CONTRACTOR determine any time during the Technical Energy Audit that savings cannot be attained to meet Agency's terms as set forth in the RFP, the Technical Energy Audit will be terminated by written notice of the CONTRACTOR to the Agency. In this event this Contract shall be cancelled and Agency shall have no obligation to pay, in whole or in part, the amount specified in this paragraph.

Agency shall have no payment obligations under this Contract in the event that CONTRACTOR's final Technical Energy Audit report does not contain a package of energy and water saving measures which, if implemented, will provide the Agency with cash savings to meet the following terms: Sufficient to fund Agency's payments of all costs and fees associated with the Energy Performance Contract, including 1) the fee associated with the Technical Energy Audit, 2) any annual fees for monitoring and maintenance to the CONTRACTOR, 3) all monthly payments on a lease purchase agreement to finance the measures. Analysis will be based on proposed financing terms over a ten year period, with a maximum financing period as specified under "Contract Term" below, and with a fixed rate of interest actually available to Agency.

Funding sources to support annual payment.:

The following payment sources will be considered in the audit:

- Annual energy cost savings
- Annual water and other utility cost savings
- Material/commodity savings, only in years when savings are achieved, including avoided costs such as lamp and ballast replacements, scheduled replacement of parts, etc.

During negotiations, Agency may consider savings to include the following:

- Maintenance cost savings such as terminated service contracts on equipment.
- Equity cash outlay:
 - At option of Agency, an equity cash outlay may be used to supplement savings
- Maintenance and operation cost savings: Savings will be limited to those that can be thoroughly documented and approved. Such savings must only be attributed to the cash flow in years when savings will actually occur.

RFP for Energy Performance Contracting Services

Attachment A: Special Terms & Conditions

Contract Term. The contract term is up to 25 years provided the cost-weighted average lifetime of the equipment exceeds the contract term, however a lesser term of 12-15 years is typically desired. This maximum term is established for Colorado Political Subdivisions per CRS 29-12.5-101(3)(h). The *ASHRAE Book of Standards* will be used in determining the cost-weighted average useful life of the equipment.

Annual Savings Exceed Annual Costs. Annual savings shall exceed annual payments each and every year while the performance guarantee is in effect. This means that excess savings in other years and interim savings during the construction period will not be allocated to meet shortfalls in any year. Annual payments include debt service, Contractor fees, maintenance services, monitoring services, and other services. This is required for Colorado Political Subdivisions per CRS 29-12.5-101(3)(b).

Annual Guaranteed Cost Savings. An annual contractual guarantee will be provided for the first three years of the contract, however, the guarantee shall be made available as a continued option for each subsequent year of the contract term. The Agency can cancel the guarantee at any time after the required period. The guarantee must provide for the sum of identified cost savings to equal or exceed the amount of the annual payment, where annual payment equals lease plus monitoring & verification fee plus required service, each and every year while the guarantee is in effect. This is required for Colorado Political Subdivisions per CRS 12-5-101(3)(a-c).

Interim Savings during Construction Period. Savings accrued during the construction period will not be allocated to the annual savings of any year. See “Annual Savings Exceed Annual Costs” above.

Excess Savings (beyond the guaranteed amount). Excess savings will be retained by Agency and will not be allocated to shortfalls in savings in other years. See “Annual Savings Exceed Annual Costs” above.

Use of Stated Cost Markups. The individual cost markups disclosed in the proposal will be used in both the Technical Energy Audit and the Energy Performance Contract, provided the size and scope of the project remain similar. Cost markups presented in the proposal can be negotiated downward.

Open Book Pricing. Open book pricing will be required, such that the CONTRACTOR will fully disclose all costs, including all costs of subcontractors and vendors. CONTRACTOR will maintain cost accounting records on authorized work performed under actual costs for labor and material, or other basis requiring accounting records. CONTRACTOR will provide access to records and preserve them for a period of three (3) years after final payment. Costs will be evaluated through price analysis to compare costs with reasonable criteria such as established catalog and market prices or historical prices. Stated cost markups will be clearly applied.

Contingency. Any unused contingency cost will not be retained by the CONTRACTOR and will be applied to the project.

Equipment Compatibility or Standardization. All equipment installed that is comparable to similar equipment at the facilities, shall offer compatibility with existing systems, and/or be of the same manufacturer for standardization of equipment agency-wide, unless excepted by Agency

Annual Appropriations. Annual payment is subject to annual appropriations. This is required of all Colorado state and local governments.

RFP for Energy Performance Contracting Services

Attachment A: Special Terms & Conditions

Inflation and Escalation Rates. Any inflation rates will be pre-approved by Agency.

Energy Escalation Rates. Where the annual lease-purchase payments are set-up to escalate each year in anticipation of annually escalating energy cost savings, a calculator will be used to determine the maximum value as developed by the US Department of Energy for energy saving performance contracts in its Federal Energy Management Program. The tool is on-line at:
<http://www.eere.energy.gov/femp/techassist/softwaretools/softwaretools.html> (EERC).

Monitoring and Verification Plan. A monitoring and verification plan will be developed per guidelines in the energy performance contract. Note that where Rebuild Colorado is providing services this will be rigorously reviewed.

Independent Review of Monitoring & Verification. The energy performance contract must provide for a portion of the guaranteed savings for Agency to contract with an independent monitoring & verification specialist to provide an independent review of the CONTRACTOR's monitoring & verification plans and reporting. This is estimated to be 10 percent of the CONTRACTORs monitoring & verification costs.

Electronic Submittal of RFP Response. The selected CONTRACTOR must provide an electronic copy of the RFP response, in Word format, in a single file.

RFP for Energy Performance Contracting Services
Attachment B: Proposed Project Schedule

ATTACHMENT B: PROPOSED PROJECT SCHEDULE

The following schedule is the proposed schedule, and may change during the project.

ACTIVITY	DATE
<u>RFP Phase</u>	
Issue RFP	May 1, 2006
Site Visit (to be arranged)	May 22, 2006
Written inquiries accepted by prospective ESCOs	May 26, 2006
Proposals Due	June 9, 2006
Proposal Review and Selection of Finalists	June 12, 2006
ESCO Interviews	June 14, 2006
ESCO Selection and Award	June 14, 2006
<u>Technical Energy Audit Phase</u>	
Contract Negotiation	June 20-27, 2006
Board approval and signatures to execute contract	June 27, 2006
Audit, Final Report and Presentation	June 20-September 4
<u>Energy Performance Contract Phase</u>	

RFP for Energy Performance Contracting Services

Attachment B: Proposed Project Schedule

Negotiation and Documentation	To be negotiated
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Board approval and signatures to execute contract	To be negotiated
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Installation	To be negotiated
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Commissioning/Monitoring Phase

Commissioning	To be negotiated
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Monitoring	To be negotiated
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Staff Training	To be negotiated
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Other	To be negotiated
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Proposed Contract Term	To be negotiated
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Note: This schedule is subject to change.

ATTACHMENT C: CONTRACTOR RESPONSE

- *An electronic copy of this RFP section is available for easier preparation.*
- *Please number and re-state each subheading or question, followed by your response.*
- *Number all pages.*

TO CONTRACTORS responding to this RFP:

For small projects, please limit your responses to a level appropriate for the scope of the project.

1. FIRM'S GENERAL APPROACH TO PERFORMANCE CONTRACTING

Describe performance contracting from your firm's perspective, describing your phases and your firm's ability to support each of the phases. Generally, this description will include references to auditing, financing, construction, commissioning, monitoring & verification, maintenance support, staff/occupant training, guarantee, etc. (1-5 pages; brevity is desired)

2. QUALIFICATIONS OF THE FIRM OR TEAM

a. Background Information on the Firm

- 1) Structure and Evolution of Firm.** Type of firm (corporation, partnership, sole proprietorship, joint venture); Name of parent company if applicable (include the name, main office address and parent company's tax identification number). Name of division or branch office if applicable; Name of current firm and number of years operating under this firm name; Former firm names if applicable and corresponding years in operation. Structure of team if this is a joint venture.
- 2) Years in Energy Business.** State the number of years your firm has been involved in the energy-efficiency related business.
- 3) Years in Performance Contracting.** State the number of years your firm has offered performance contracting services.
- 4) Number of Performance Contracting Projects.** State the number of performance contracting projects completed by your firm. Number under \$1 million. Number over \$1 million.

b. Financial Qualifications & Stability of Firm

- 1) Financial Soundness.** Describe the financial soundness and stability of the firm.
- 2) Profitability.** Has your firm or parent company been profitable each year for the past three years?
- 3) Financial Report.** Submit the most recent annual summary (1-3 pages) of the annual Statements of Financial Conditions, including balance sheet, income statement and statement of cash flows, dated within the past twelve (12) months, along with name, address, and the telephone number of firm(s) that prepared the Financial Statements.
- 4) Bonds.** What is your current bonding capacity? What is your current bonding rate? What is your firm's bond rating? Is your firm currently bondable for: 100% of a payment bond for construction of this project, 100% of a performance bond for construction of this project? Include a letter from a licensed surety as evidence of ability to bond for each of these categories.

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Attachment C: CONTRACTOR Response

c. **NAESCO Accreditations and other Pre-Qualifiers.**

State if your firm is accredited by industry organizations, such as the National Association of Energy Service Companies (NAESCO), or pre-qualified for work through the U.S. Department of Energy for federal facilities or the U.S. Department of Defense. Describe the relevance or importance of any accreditations or pre-qualifications with regard to this project.

d. **Compliance with Requirements**

Affirm your ability to meet requirements: ***“Yes, this firm or team responding to this proposal understands the requirements specified in Attachment A: Special Contract Terms and Conditions, Attachment F: Model Technical Energy Audit and Project Proposal Contract, and Attachment G: Model Energy Performance Contract and will abide by them.”***

3. PROJECT HISTORY

a. **Project List.**

List all energy performance contracts that your firm or personnel have managed within the last five years. Include list as shown below. Truncate the list at one page.

1) **PERFORMANCE CONTRACTING PROJECTS**

Project Name	City, State	Total Project \$	Year completed

All projects listed should be those conducted only by your firm. If you deem it relevant to list projects under contract to a different firm, clearly identify the name of firm responsible for the project and indicate why you're including it as a reference for your company and for this project.

2) **OTHER PROJECTS** (only if deemed relevant to this project)

If desired, also list related projects deemed relevant to this work, particularly those managed in the state.

Project Name	Project Type	City, State	Total Project \$	Year constructed

RFP for Energy Performance Contracting Services

Attachment C: CONTRACTOR Response

b. Case Studies – Project Performance.

Provide detailed information on *performance contract-based projects* you want to showcase that have similarities to work related to this proposal. Similarities could include type/use of building, size of individual buildings, size of total expected project, technical scope of projects, geographic region (work in this state or similar type of metro/rural region). Include the following information on each project, as a minimum (*no preferred format*):

Project Owner:

Name. Name of state department, university, school district, office building, etc.

Location. city/state

Contact Information. Names and contact information of owner(s)' representatives who can serve as references.

Project Information:

Type of Project: performance contract; other

Project Size. Number of buildings, total square footage, total contract amount and the total project capital cost.

Financing: Type of financing used and grants/rebates, etc. Describe your involvement in securing funds.

Project Implementation Dates: Date of audit beginning and acceptance, and construction start and acceptance.

List of Improvements. Type of retrofits and operational improvements related to energy, water and other cost savings.

Project Performance: State amounts of projected annual savings, guaranteed annual savings, and actual annual savings.

Project Personnel. State the name(s) of individuals involved in the project and their role. Note if these personnel are assigned to Agency's project.

Comments. Comment on any special features, services, conditions, creative approaches, special needs of Agency, etc. that may be of interest.

All projects listed should be those conducted only by your firm. If you deem it relevant to list projects under contract to a different firm, clearly identify the name of firm responsible for the project and indicate why you're including it as a reference for your company and for this project.

c. Relevant Experience - Overview of Strengths

Briefly summarize your project histories to define your firm's strengths and the relevance of past work to this project (experience similar to this project in terms of size, scope, facility type; experience with types of retrofits applicable to this project; etc.).

4. PERFORMANCE CONTRACTING CAPABILITY & TECHNICAL APPROACH

a. General Scope of Services

Following is a minimum scope of services acceptable to compete for an energy performance contract. Add a brief comment for each item (25 words or less preferred) to demonstrate your capability for each.

Expertise in energy systems in buildings (include local project name and date for each):

RFP for Energy Performance Contracting Services

Attachment C: CONTRACTOR Response

- 1) Lighting (indoor & outdoor)
- 2) Heating
- 3) Ventilation and indoor air quality
- 4) Cooling
- 5) Controls systems
- 6) Water-using systems (indoor plumbing; outdoor irrigation)
- 7) Other (central plants, distributed generation, kitchens, laboratories, laundry, pools, renewables, fuel switching, daylighting, as deemed potentially applicable for this project).

Experience and capability in:

- 8) Energy auditing (identify potential energy-saving measures, determine savings projection based on standard energy engineering principles; estimate project costs; present package of measures with cash flow)
- 9) System design engineering (mechanical, electrical)
- 10) Procurement, bidding
- 11) Construction
- 12) Commissioning of projects and retro-commissioning of existing buildings
- 13) Project management
- 14) Measurement and verification of savings
- 15) Asbestos identification and abatement as applicable

Ability to provide:

- 16) Performance guarantee for every year of the financing term
- 17) Insurance per contract requirements
- 18) Equipment warranties
- 19) Financing partner with ability to provide a municipal, tax-exempt lease purchase
- 20) Hazardous material handling
- 21) Performance monitoring
- 22) Training (maintenance staff, occupants)
- 23) Long-term maintenance services on energy systems
- 24) Application for an Energy Star Label and LEED certification.
- 25) Calculation and reporting of emissions reductions

b. Performance Contracting Technical Approach

- 1) **Performance Guarantee.** How is a performance guarantee provided (self-guarantee or third party) and describe the value of this approach?
- 2) **Insurance.** How is insurance provided (self-guarantee or third party) and describe the value of this approach?
- 3) **Warranties.** Who provides warranty service (CONTRACTOR or manufacturer)? How is this provided? Describe the value of this approach.
- 4) **Standards of Comfort.** Describe standards of comfort that are generally used for light levels, space temperatures, ventilation rates, etc. in the intended facilities. Describe any flexibility.
- 5) **Baseline Calculation Methodology.** Describe in detail the methodology your firm normally uses to compute baseline of energy and water use as well as performance.
- 6) **Project Schedule.** Comment on your ability to meet the schedule and the reasonableness of the schedule.

RFP for Energy Performance Contracting Services

Attachment C: CONTRACTOR Response

c. **Sample Technical Audit.**

Submit a sample technical audit conducted by your firm for a similar project (as directed in the Proposal Submittal Information).

- 1) Briefly describe this sample audit. It should be representative of the type of facility and the type of audit that will be conducted.
- 2) Verify that this audit includes detailed energy and economic calculations.
- 3) Verify that it was conducted by a current member of the team proposed for this project.

d. **Financing Company**

CONTRACTOR will be required to solicit bids for financing on behalf of Agency. (Since Agency will sign a separate agreement with the financing company, Agency will review bids, select desired firm, and develop the financing agreement.) To solicit bids, CONTRACTOR will use the RFP and supplemental information provided in **Appendix H (Financing Bid Package)**.

- 1) Identify three financing companies that you recommend as qualified to provide municipal tax-exempt financing for this project.
- 2) Provide letters of qualifications and references from each firm.

e. **Site-Specific Approach**

- 1) Types of Services. Summarize the scope of services (auditing, design, construction, monitoring, operations, maintenance, training, financing, etc.) identified for this project.
- 2) Potential Projects. Based on your preliminary assessment of the information provided, describe any equipment modifications, installations or replacements at the facility that your firm would consider installing as a part of this project. Address energy, water and operation and maintenance opportunities. Also describe any special features, renewable technologies, or advanced technologies that might be applicable. Describe any special features or services associated with your proposed improvements that would add value to Agency. Describe your approach to achieve compatibility (such as open systems) and/or standardization of equipment in the facilities to be addressed.

5. MANAGEMENT AND STAFFING FOR THIS PROJECT

This section applies to this project, with an emphasis on local capability/service.

a. **Management**

- 1) **Coordination.** Describe your firm's approach to managing this project. Include an organizational chart showing clear lines of communication and responsibility. Describe the transition and responsible parties from the sales to auditing phase, auditing to construction phase, construction to follow-up monitoring phase, etc.
- 2) **Construction Management.** Describe how your firm would work with current building management and maintenance personnel in order to coordinate construction and avoid conflicts with the building's operation and use. Describe your flexibility and/or any limitations regarding possible Agency activities such as: management of additional energy and water projects, monitoring of installation and performance of CONTRACTOR projects, integration of other identified capital needs with CONTRACTOR projects which may or may not contain energy and water saving opportunities.

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Attachment C: CONTRACTOR Response

- 3) **In-house Capability vs. Subcontractors.** Generally describe the types of services (both professional and construction services) that you offer in-house and the services you offer through subcontractors, and describe the strategy behind in-house vs. subcontractor use. (Detailed information on pricing of subcontractors is requested in the Cost Section below.)
- 4) **Agency Involvement.** Describe how you engage the Agency in decision-making regarding project scope, equipment specifications, ongoing operational and maintenance strategies, etc., and how you incorporate Agency's needs.
- 5) **Local Staffing and Support.** Describe extent of local staffing and support for the geographic region. Include basic job descriptions and capabilities of the local staff. Describe the relevance or importance of local presence with regard to this project.
- 6) **Long-term Servicing.** Describe long-term servicing of equipment and systems. State the location of your nearest servicing office.

b. Personnel Information.

- 1) **Qualifications and Experience of Staff Assigned to this Project.** Identify the individual who will have primary responsibility for each task and phase of the project. List name, title, intended role and responsibilities for the duration of the contract, educational background, specific qualifications related to role and responsibilities, past relevant experience, number of years of relevant experience, supervisory responsibilities if relevant, list of projects individual was associated with during the last five years including type of project and project cost and resume. Tasks and phases to address include technical analysis, engineering design, construction management, construction, training and post-contract monitoring. Indicate the percent of time each person is available to work on this project. Indicate their office location (city/state).
- 2) **Added Qualifications and Experience.** Describe any added expertise and capability of staff available through the parent company, other subcontracts, etc. to provide back-up strengths in technical analysis, engineering design, architectural design (if applicable), construction management, construction, training and post-contract monitoring, etc.

c. Self-Performed Work or Subcontractors.

- 1) State whether work is completed by the CONTRACTOR or by a subcontractor for each category of measure (auditing, design, procurement/supply of equipment from vendors and manufacturers, engineering, construction management services, lighting, HVAC, controls, monitoring & verification, etc.),
- 2) Describe how subcontractors are selected. Also comment on your ability to competitively select subcontractors.
- 3) Identify any subcontractors already selected.

6. COST AND PRICING

a. Markup Costs and Fees

Clearly indicate (mark by page) if elements of this section are requested to be treated as proprietary (the responsible Purchasing official will make the final decision if this is to be treated as proprietary).

Markup costs are disclosed to provide a typical project costing approach for a project of similar scope and size. This disclosure will provide the open book pricing structure to be used by the

RFP for Energy Performance Contracting Services

Attachment C: CONTRACTOR Response

CONTRACTOR for this project. The markups will be used in the Technical Energy Audit Contract and Energy Performance Contract. (A substantial change in the scope and size of the project may necessitate renegotiation of the markups.)

1) Markups, Fees, and Costs

Note that all subcontractors and partners will be subject to full disclosure for open book pricing.

a) Markups. Provide maximum allowable markups for each category you use in your pricing structure:

- Markups are calculated as a percentage added to the base cost (do not use margins).
- Categories may include but are not limited to: overhead, profit, guarantee, warrantee, markups on materials, equipment, supplies, shipping, rentals, labor, subcontractors, self-performed work, engineering, design, construction management, construction trades, contingency, commissioning, training, legal services, administrative work, and/or any other markup category to be used by the CONTRACTOR on this project.
- Clearly describe how self-performed work will be charged (billed hourly, billed as a markup of equipment and labor costs, etc.). If billed hourly, what markups will be applied to the hourly rate (overhead, standard markups indicated below, etc.).
- Organize categories by listing similar categories together under a more general heading (as shown in the table below).
- **Categories not included will not be allowed to be used in the project.**
- Do not provide a range; provide only the maximum allowable markup based on your understanding of the potential scope of work.
- If the proposal is from a joint CONTRACTOR partnership, provide this information on each participating company.
- *Values for ALL categories in the following tables must be provided.*

MARKUPS		Describe what markup percentage applies to, such as installed cost, project cost, construction costs, etc.
Cost category	%	
Markups on subcontractors/outside labor		
Markups on equipment/supplies		
Design/Engineering		
Construction Management		
Commissioning		
Monitoring and Verification		
Overhead		
Profit		
Other		
Other		

RFP for Energy Performance Contracting Services

Attachment C: CONTRACTOR Response

b) Fees: Identify fees that you typically use in your pricing structure:

- Categories may include but are not limited to: bonds, permits, maintenance agreements, annual monitoring & verification fees, etc.
- Describe how fees are determine
- Describe how fees are charged to the project and when they are applied
- If fees are based on a percentage of project cost, include them in the markups table instead.
- If markups are applied to fees, identify in the table.

FEES			
Category of Fee	How Determined and Used	Markup on Fee (if any)	Years Applied (one-time, annual, etc)

c) Audit Cost.

- 1) **Total Cost.** State the total cost of the technical energy audit. Ensure that your cost is based on the approach and requirements included in **Attachment F: Model Technical Energy Audit and Project Proposal Contract**. For the purpose of this evaluation, assume all facilities listed in **Attachment E: Technical Facility Profile** will be audited.
- 2) **Unit Cost.** State the cost per square foot of the audit. This cost will be evaluated on the basis of reasonableness, so an unrealistically high or low cost will be devalued in the evaluation process.
- 3) **Meet Full Scope of Work of Audit Contract.** State your capability to complete the full scope of work as presented in **Attachment F: Model Technical Energy Audit and Project Proposal Contract**, within your proposed cost.

d) Contingency:

- How will contingency be applied to cover changes in work scope and subcontractor change orders?
- What is your typical level of contingency budget for lighting, electrical, mechanical, controls projects, and other projects? (Note that all unused contingency funds will revert to Agency or be applied to additional work scope through a State approved change order.)

e) Cost competition: Describe your process to solicit bids on equipment/labor or to secure the best cost.

2) **Application of Markups and Fees (Hypothetical Example).**

Provide a sample of your pricing model using a two-measure performance contracting project. Show the complete detail of what will be provided to the Agency in the actual project using the markups and fees you will commit to in the actual project, as identified above, for all categories, fees and services that will be seen in the actual project (including the audit cost).

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Attachment C: CONTRACTOR Response

Include a sample project proforma and clearly indicate all fees required for monitoring & verification, project management and all services that may be included in the actual project. All markups and fees (including the audit cost) used in this example must be representative of what will be used in the actual project.

Additional markups, fees, or service category costs not shown in this example will NOT be allowed in the final contract.

Incomplete information will be considered an incomplete response and cause the response to be rejected.

- a) Provide an example lighting measure that relates to this project in size and scope. Provide all pricing documentation as you will provide it for open book pricing in the final contract. Clearly differentiate the subcontracted portion of the project and break out labor, materials and other categories as you will for open book pricing.
 - b) Provide same information for an example boiler measure (or other heating/cooling equipment if a boiler replacement is not relevant for this project)
 - c) Show the two measures above in a complete two-measure performance contracting project. Provide a proforma to clearly indicate all costs and fees represented as they will be applied in the final contract. Use the format and structure you will use in the final contract.
- 3) **Best Value.** Briefly describe how your approach to performance contracting delivers best value for the investment. This is an opportunity to point out how your company may be able to deliver a more cost-effective overall project due to corporate structure, relationships with vendors, depth of experience and expertise, local relationships and experience, experience in similar types of facilities, knowledge of particular retrofits, etc. Also describe any utility rebates or other financial incentives or grants can potentially provide and/or facilitate.

ATTACHMENT D: EVALUATION

WRITTEN PROPOSALS

The Evaluation Team will identify scoring weights for each section, with the “Cost and Pricing” section equaling a minimum of 30% of the total score of the written response to this RFP. The weights of criteria will be determined by the Evaluation Team.

The Evaluation Team recognizes it is premature to place a major emphasis on projected financial benefits prior to the completion of the Technical Energy Audit, because the Audit will define the potential scope and cost benefit. Therefore, the most emphasis will be on qualifications and less emphasis will be placed on the cost information.

INTERVIEWS

CONTRACTORS in the competitive range will be invited for an oral interview. The proposal scores will be modified based on clarifications to responses provided in the interview.

SELECTION

The Evaluation Team will identify the apparent awardee and then contact references to complete the evaluation.

With quality references, the apparent awardee will be notified of selection; otherwise, the same process will be used with the second-ranked CONTRACTOR.

RFP for Energy Performance Contracting Services
Attachment E: Technical Facility Profile

ATTACHMENT E: TECHNICAL FACILITY PROFILE

The information in this technical facility profile is provided to inform the CONTRACTOR about the condition of the facilities. The information was prepared with diligence. The CONTRACTOR is responsible for verifying the accuracy, as necessary.

Buildings included in this report:

Building Name	Area (sf)
Town Hall	15,236
Marshall's Office/KBUT	5,800
308 3rd	4,577
Old Town Hall	3,862
Dyer Shop	7,900
ATAD and Bio-Solids	
Storage	10,200
Wastewater Treatment Plant	12,925
Total/Average	60,500

Library – No recommendations

Depot – No data on this building since it was only recently acquired by the town.

Buildings not included in this report:

- Filter Plant (Water Treatment Plant)
- Ranch House
- Skate Rink
- Nordic Center
- Depot

Utility Information

Electricity Company – Gunnison County Electric Association, Inc.

Natural Gas Company – Atmos Energy

Annual Utility Budget

RFP for Energy Performance Contracting Services
Attachment E: Technical Facility Profile

Town of Crested Butte

Annual Energy Costs

January 2004 through December 2004

Building Name	Area (sf)	Electricity Cost (\$/yr)	Natural Gas Cost (\$/yr)	Total Energy Cost (\$/yr)	Total Energy Cost per SF (\$/sf/yr)
Town Hall	15,236	\$4,814	\$10,962	\$15,776	\$1.04
Marshall's Office/KBUT	5,800	\$6,956	\$1,839	\$8,795	\$1.52
308 3rd	4,577	\$2,065	\$1,661	\$3,725	\$0.81
Old Town Hall	3,862	\$1,438	\$1,453	\$2,890	\$0.75
Dyer Shop	7,900	\$1,359	\$4,612	\$5,971	\$0.76
ATAD and Bio-Solids Storage	10,200	\$11,092	\$8,505	\$19,598	\$1.92
Wastewater Treatment Plant	12,925	\$26,837	\$2,083	\$28,920	\$2.24
Total/Average	60,500	\$54,560	\$31,115	\$85,675	\$1.42

January 2004 through December 2004

Building Name	Electricity (kBtu/SF/yr)	Electricity (\$/SF/yr)	Nat. Gas (kBtu/SF/yr)	Nat. Gas (\$/SF/yr)	Total (kBtu/SF/yr)	Total (\$/SF/yr)
Town Hall	11.4	\$ 0.32	91.7	\$ 0.72	103.1	\$ 1.04
Marshall's Office/KBUT	41.3	\$ 1.20	35.3	\$ 0.32	76.6	\$ 1.52
308 3rd	19.1	\$ 0.45	39.7	\$ 0.36	58.8	\$ 0.81
Old Town Hall	13.9	\$ 0.37	40.0	\$ 0.38	54.0	\$ 0.75
Dyer Shop	6.5	\$ 0.17	72.5	\$ 0.58	79.0	\$ 0.76
ATAD and Bio-Solids Storage	31.5	\$ 1.09	105.1	\$ 0.83	136.6	\$ 1.92
Wastewater Treatment Plant	128.5	\$ 2.08	19.0	\$ 0.16	147.4	\$ 2.24
Average	42.8	\$ 0.90	58.0	\$ 0.51	100.8	\$ 1.42

Annual Energy Usage

January 2004 through December 2004

Building Name	Area (sf)	Electricity use (kWh)	Natural Gas use (Ccf)
Town Hall	15,236	50,760	13,979
Marshall's Office/KBUT	5,800	70,271	2,048
308 3rd	4,577	25,611	1,818
Old Town Hall	3,862	15,773	1,546
Dyer Shop	7,900	14,938	5,730
ATAD and Bio-Solids Storage	10,200	94,200	10,720
Wastewater Treatment Plant	12,925	486,600	2,455
Total	60,500	758,153	38,296

January 2004 through December 2004

Building Name	Blended electricity cost (\$/kWh)	Average natural gas cost (\$/Ccf)
Town Hall	\$0.095	\$0.784
Marshall's Office/KBUT	\$0.099	\$0.898
308 3rd	\$0.081	\$0.914
Old Town Hall	\$0.091	\$0.940
Dyer Shop	\$0.091	\$0.805
ATAD and Bio-Solids Storage	\$0.118	\$0.793
Wastewater Treatment Plant	\$0.055	\$0.849
Total Average	\$0.072	\$0.812

RFP for Energy Performance Contracting Services

Attachment E: Technical Facility Profile

Past Energy Improvement Efforts

- Very limited T-8 lighting upgrades. Boiler w/controls replaced in Marshals Office/KBUT. Upgrading streetlights and interior incandescent lamps in Town Hall to compact fluorescent lamps.

Future Plans

- If Mountain Express builds a new bus garage, the existing bus garage, currently occupied by Mountain Express and connected to the Dyer Public Works building will be taken over by the town.

Energy-Using Systems Description

Town Hall

The 15,236 square foot Town Hall building is about over 80 years old having been built in 1920s. Built originally as a school building, the town took possession of the building in 1978. The building houses many of the town's administrative central offices and operates as a typical commercial office building, Monday through Friday 7:00 AM to 6:00 PM. However, the gym and aerobics areas may be used most any time during evenings and weekends.

The building is constructed mainly of 1920s-style masonry, and, according to facilities personnel, has little or no insulation in either the walls or roof. Some years ago while still owned by the school district, the original windows were replaced with more energy efficient windows and some were reduced in overall size.

Because the building is old and uninsulated, its heating energy utilization index (EUI) is high. The building consumes high amounts of natural gas energy on a per square foot basis: 97 thousand Btus per square foot per year (kBtu/sf/yr). Also contributing to the high natural gas use may be the old age and questionable condition of the building's old pneumatic temperature control system. For electricity, the building's EUI is less than 12 kBtu/sf/yr which is quite low, probably due to the fact there is no cooling and many occupants keep lights off during the day. (See Appendix B for detailed utility information and building comparisons.)

The following describes the existing energy using systems and recommendations for improving their energy efficiency.

Lighting

Existing Condition

According to facilities personnel, some time ago, the building's ceiling mounted fluorescent lighting system was replaced with the current old style-design suspended "globe" fixtures. Each of these fixtures contains a single 100 watt incandescent lamp. Scattered throughout the building, there remain several "remnants" of the old fluorescent system. The old fluorescent fixtures are very inefficient by today's standards and contain two 8-foot T-12 lamps and one old magnetic ballast. The fixtures themselves are old looking and not very attractive. In the gym, old mercury vapor lights currently provide lighting. Exit signs throughout the building are old, high maintenance incandescent signs.

Recommendations

- Replace the 100 watt incandescent lamps in each suspended globe fixture with high efficiency 27 watt compact fluorescent (CFL) "twister" lamps. In recent years, significant improvements have been made to CFL technology including greater efficiency, vastly improved color rendition, instant-on, and electronic ballasts. This easy one-for-one screw-

RFP for Energy Performance Contracting Services

Attachment E: Technical Facility Profile

in replacement will reduce the lighting electrical requirements over 70 percent and will keep the building cooler as well. Furthermore, CFLs last about 10 times longer than incandescent lamps.

- Replace all remaining fluorescent fixtures with new, more efficient and modern fluorescent fixtures. The fixtures should be equipped with 4-foot T-8 fluorescent lamps and electronic ballasts.
- In the gym, replace each of the mercury vapor fixtures with new, 6-lamp fluorescent fixtures designed specifically to replace the existing type of lighting. Not only will this retrofit vastly improve the appearance of the gym lighting, it will use standard 4-foot T-8 lamps and electronic ballasts.
- Replace each existing exit sign with a new exit sign using light emitting diode (LED) lights. This will reduce their wattage from 40 watts to less than 5 watts and, LEDs are typically guaranteed to last 20 years without burning out, which will save extensively on maintaining the signs.

Heating, Ventilating, and Air Conditioning (HVAC), and Temperature Controls

Existing Condition

Town Hall is presently heated with a very old heating system. A single Ajax 1.1 million Btu per hour output cast iron natural gas-fired hot water boiler provides heating water that is pumped to wall mounted radiation units throughout the building by two ½ horsepower constant volume circulating pumps, , one for each of two zones This boiler replaced an older coal-fired boiler when the building was being operated by the school district in about 1978. Since it is approaching 30 years old, it is likely that it no longer operates as efficiently as it once did and is nearing the end of its useful life. Furthermore, the boiler is controlled in a very rudimentary manner and is not equipped with any sophisticated energy saving controls.

Temperature control in the building is accomplished by an old pneumatic control system. Each space is equipped with at least one pneumatic single setpoint thermostat that controls a pneumatic zone control valve on one, or a series of radiation units. The thermostats are not capable of performing any energy efficiency control schemes, such as automatically resetting the space temperature for unoccupied times. Furthermore, according to facilities personnel, there are significant leaks throughout the pneumatic distribution system that causes inaccurate temperature readings and valve control and causes the pneumatic system's air compressor to operate excessively. This condition also often results in comfort issues.

Ventilation in the building is provided by operable windows. There is no cooling currently present in the building.

Recommendations

- Replace the existing old, inefficient boiler with a new, efficient “fin-tube” type boiler with multi-stage firing rate capability. The boiler should also be equipped with a sophisticated controls package that includes outdoor air heating water reset. The reset controls adjust the heating water temperature to better match the heating requirements based on outdoor air temperature. As it warms up outside, the controls will set the heating water temperature requirement lower so the boiler fires less, and, conversely, when it gets colder outside, the heating water temperature will be set at a higher temperature.
- Replace all of the old pneumatic controls with new electronic controls. This will involve the installation of new building-wide building automation system (BAS) that will include

new, electronic programmable-type thermostats or temperature sensors, and the replacement of all old pneumatic zone temperature control valves with new, electric valves. The new system, coupled with a new efficient boiler will reduce natural gas costs in the building and will serve to improve overall occupant comfort.

- The building needs insulation. This study cannot adequately analyze the building's structural and historic requirements adequately to determine estimated costs and savings. However, intuitively, adding insulation, especially in the roof, will reduce heat loss and lower the building's heating bills.

Marshall's Office/KBUT

Built when owned by the school district as a middle school in the early 1990s, this 5,800square foot building presently houses the town's Marshall's office as well as the radio station KBUT. The Marshall's office operates around the clock year round. It is basically a single story concrete block structure with adequate insulation levels in both the walls and roof.

Because of the long hours of operation and the electrical needs of the radio station, this building consumes large amounts of electrical energy. But, because of heat generated by the radio station's equipment, its heating needs are relatively low. The EUI for this building are 41.3 kBtu/sf/yr and 35.3 kBtu/sf/yr for electricity and natural gas, respectively. (See Appendix B for detailed utility information and building comparisons.)

The following provides some detail about the existing energy using systems and recommendations for improving their effectiveness and energy efficiency.

Lighting

Existing Condition

In the radio station areas, most lighting is provided by ceiling mounted track lights with incandescent lamps, most of which are 75 watts. On the Marshall's side, general lighting is from ceiling mounted 4-foot fluorescent fixtures with T-12 lamps and magnetic ballasts. During the building audit, it was observed that lights in several unoccupied areas were operating. Exit signs are incandescent.

Recommendations

- Replace the incandescent lamps in each track fixture with high efficiency 27 watt compact fluorescent (CFL) "twister" lamps. In recent years, significant improvements have been made to CFL technology including greater efficiency, vastly improved color rendition, instant-on, and electronic ballasts. This easy one-for-one screw-in replacement will reduce the lighting electrical requirements over 60 percent and will keep the building cooler as well. Furthermore, CFLs last about 10 times longer than incandescent lamps. (If lights are on dimmers, replace dimmer switches with regular toggle-type switches.)
- In the Marshall's areas, replace the existing T-12 fluorescent lamps and magnetic ballasts with high efficiency T-8 lamps and electronic ballasts. This simple relamp/reballast will reduce the electrical consumption of the lighting fixtures by 30 percent and greatly improve the overall appearance of the offices due to improved color rendition and the elimination of flicker and humming.
- Replace each existing exit sign with a new exit sign using light emitting diode (LED) lights. This will reduce their wattage from 40 watts to less than 5 watts and, LEDs are typically

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guaranteed to last 20 years without burning out, which will save extensively on maintaining the signs.

Heating, Ventilating, and Air Conditioning (HVAC), and Temperature Controls

Existing Condition

There are two HVAC systems in this building; in-floor hot water radiant heating and two hot water heating and ventilating air handling units (AHUs), one of which also provides direct expansion cooling to the radio station area. A single 320 thousand Btu per hour output natural gas-fired hot water boiler provides constant temperature heating water to these terminal devices. During the building audit, the AHU that serves the Marshall's area was not operational. Temperatures are set by electronic zone thermostats throughout the building. The AHU serving the radio station is programmed to turn off at night.

Recommendations

- The boiler and controls have been replaced.

308 3rd

This building was the original home of the town's administrative offices but now provides office space for several non-profit organizations as well as the fire district's offices. It was built sometime in 1920s and is 4,577 square feet in area. Its foundation is authentic cinder block and the windows, which have been mostly fixed closed, are in pretty bad condition. According to facilities personnel, the basement walls have some rigid insulation, the first floor walls contain blown-in cellulose insulation, and the ceiling and walls of the second floor were insulated when the town converted the empty attic into office space.

Despite its age and condition, this building is the second lowest of the buildings analyzed in natural gas use on a per square foot basis at 39.7 kBtu/sf/yr. This building's electric EUI is 19.1 kBtu/sf/yr due most likely because of the renovated areas electric heating system. (See Appendix B for detailed utility information and building comparisons.)

The following provides some detail about the existing energy using systems and recommendations for improving their effectiveness and energy efficiency.

Lighting

Existing Condition

The general lighting in this building is old, ceiling mounted "globe" fixtures using incandescent lamps. There are, however, a few older T-12 fluorescent fixtures in the building. Exit signs presently use incandescent lamps.

Recommendations

- Replace all incandescent lamps with new, high efficiency 27 watt compact fluorescent lamps.
- Replace all T-12 fluorescent lamps and magnetic ballasts with high efficiency T-8 lamps and electronic ballasts.
- Replace incandescent exit signs with new LED signs.

Heating, Ventilating, and Air Conditioning (HVAC), and Temperature Controls

Existing Condition

The first floor of this building is heated with a very old steam heating system. The system consists of a single, natural gas-fired boiler that produces steam at less than 5 pounds per square inch (psi) pressure. The boiler is a 1987 vintage Dunkirk boiler rated at about 200 thousand Btu per hour

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output. The steam is distributed to old, cast iron radiators located throughout the first floor. Each radiator is controlled only by manual hand valves. The boiler's on/off cycling is controlled by a single, centrally located thermostat. The recently renovated attic is heated completely with electric baseboard heaters, each having its own electric thermostat. The area with the public restrooms is heated with electric radiant ceiling panels.

Ideally, all heating equipment should be replaced with new, modern equipment, the walls should be insulated, and the windows upgraded. However, because the building uses so little natural gas and only a moderate amount of electricity, the energy cost savings financial justification for a complete replacement is very small. Following are some low-cost recommendations to help make the existing equipment work more efficiently.

Recommendations

- Install programmable thermostats for the electric baseboard heaters and radiant panels. This will ensure that they do not operate as much during unoccupied times.
- Install thermostatically controlled air vents on the cast iron radiators. These devices open and close the vent only when heat is needed in the direct vicinity, thereby preventing additional steam from entering the radiator when not needed. This measure may also improve comfort conditions.
- Install thermal shades on the windows that do not presently have them to improve comfort conditions and reduce heat loss. (This will improve comfort near the windows.)

Old Town Hall

At less than 4,000 square feet in area, this building is the smallest of the buildings included in this report. Once used as the public meeting place of the Town Council, it now houses an art gallery, small community theater, and a bus stop with restrooms. During a 1990s renovation, floors were replaced and new insulation was installed in the walls and roof.

The building's EUI for electricity and natural gas, respectively is 13.9 kBtu/sf/yr and 40 kBtu/sf/yr.

Following is a brief summary of some of the building's energy using systems and recommendations for improving their efficiency.

Lighting

Existing Condition

Lighting throughout the building is a combination of various incandescent fixtures. In the art gallery, display lighting is provided by low-voltage tungsten-halogen track lights. It was observed during the building audit, that these lights generated excessive heat causing comfort issues in the gallery. The remaining portions of the building use a variety of incandescent fixtures. Exit signs are incandescent.

Recommendations

- Strongly consider reducing the number of track lights in the art gallery or replacing many (if not all) existing track heads with high efficiency compact fluorescent heads. Because of the optical differences between the existing and fluorescent heads, the gallery should experiment to determine where the replacements will be most appropriate.
- Replace remaining incandescent lamps with efficient compact fluorescents.
- Replace incandescent exit signs with new LED signs.

Heating, Ventilating, and Air Conditioning (HVAC), and Temperature Controls

Existing Condition

In the 1990s, when the building was renovated, a new hot water radiant floor heating system was installed. Heating hot water is produced by a single natural gas-fired boiler (size unknown). Zone thermostats control the temperatures in the spaces. On the second floor, a Lennox “Whisper Heat” natural gas-fired, forced air furnace provides heat. Its control is accomplished by a single setpoint thermostat.

Recommendations

- Replace thermostats with programmable thermostats that will automatically set back the space temperature setpoints when unoccupied.

Dyer Public Works Building

This building is one of the newer buildings owned by the Town. This 7,900 square foot building is divided into two parts, one side currently used by Mountain Express, the local public transportation company, for bus maintenance, and the other side occupied by the town itself for maintenance of its vehicles. Offices for the Public Works department are also in this building. A storage building is also present on this site in which some trucks and sand are stored.

According to Town personnel, Mountain Express is considering building their own bus garage. If so, the Town will take over occupancy of the entire building.

The town-occupied portion of the building was recently upgraded with additional insulation in the walls and ceilings, as well as on the large overhead doors. On the Mountain Express side, none of these upgrades have been implemented, so this side has its original, minimal, insulation levels.

On a square foot basis, this building uses the least amount of electricity at 6.5 kBtu/sf/year.

However, natural gas use on a square foot basis is second highest only to Town Hall at 72.5 kBtu/sf/yr. These EUIs are not atypical for this type of building since electric loads are minimal, including lighting and power equipment. Natural gas use is probably higher on the Mountain Express side due to its lack of extra insulation and the fact that the radiant heating systems are located overhead and are supplemented by two large gas unit heaters. Also adding to heating loads are the opening of overhead doors and infiltration through unsealed doors in the winter.

Following is a brief summary of some of the building’s energy using systems and recommendations for improving their efficiency. The town should consider the future of the building when considering the recommendations.

Lighting

Existing Condition

On the Town-occupied section of the building, lighting in the bay areas is provided by suspended 400 watt metal halide lo-bay fixtures and several 2-lamp, 8 foot suspended industrial fixtures with T-12 lamps and magnetic ballasts. In the Mountain Express side, the general lighting is similar, lo-bay metal halide fixtures and 8 foot industrial fluorescents. In the storage building, the lighting is used infrequently and consists of bare-lamp incandescent fixtures. The upstairs offices are lit using older T-12 fluorescent fixtures. Exit signs throughout the building are incandescent.

Recommendations

- Replace all old 8 foot fluorescent fixtures with new 8 foot fixtures having four T-8 4 foot lamps and electronic ballasts.

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- Replace the T-12 lamps and magnetic ballasts in the offices with T-8 lamps and electronic ballasts.
- Replace incandescent exit signs with new LED signs.

Heating, Ventilating, and Air Conditioning (HVAC), and Temperature Controls

Existing Condition

On the Town-occupied side, heat is provided by a very efficient and effective in-floor hot water radiant heating system. The heating water is produced by a single Teledyne-Laars natural gas-fired boiler rated at 184,000 Btu per hour output. The thermostats controlling this system are electric, single setpoint stats.

Recommendations

- Install programmable thermostats.

Wastewater Treatment Plant

The wastewater treatment plant (WWTP), is rated to be able to process a maximum of 0.6 million gallons per day (MGD). However, according to facilities personnel, the maximum average is closer to 0.32 MGD, so the plant has plenty of remaining capacity. The WWTP consists of several buildings all dealing with a portion of the treatment process including the pre-treatment building, the clarifier building, the bio-solids processing building (ATAD), and the bio-solids storage building. Overall, observations during the site survey indicate that for the most part, the plant operates smoothly and efficiently. Measures have been taken over time to improve both the process and the efficiency with which the facility operates. Examples include the use of variable speed drives on several process pump motors, improving process control systems and the use of in-floor heating in the bio-solids storage building.

The town currently is dealing with the removal of bio-solids from the site. Presently, bio-solids are physically trucked off site to Leadville. According to facilities personnel, one load per week in the “high season” and a load every two weeks is removed during the remainder of the year at a cost to the town of \$1,600 per load. The town will continue to try to find appropriate uses for the sludge.

All buildings were briefly surveyed during the site visit. Because of the improvements already made around the facility, this report will provide general recommendations to further improve plant efficiency that should be looked at in greater detail if the town proceeds with a Performance Contracting program.

Lighting

Existing Condition

Lighting in these buildings is a mix of metal halide and older, less efficient T-12 fluorescent technology. Exit signs are incandescent.

Recommendations

- Replace all remaining old fluorescent T-12 lamps and magnetic ballasts with highly efficient T-8 lamps and electronic ballasts. To standardize on lighting equipment, convert any 8-foot fixtures to use 4-foot lamps.
- Replace incandescent exit signs with new LED signs.

Heating, Ventilating, and Air Conditioning (HVAC), and Temperature Controls

Existing Condition

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Other than the bio-solids storage building that is heated using a hot water radiant floor system with heating water provided from the ATAD boiler, and the ATAD building, the remaining areas are heated natural gas-fired or electric heating units. The ATAD hot water units use heating water produced by a 1997 vintage Weil McLain natural gas-fired boiler. This boiler appears to be oversized for its loads, rated at 2.4 million Btu per hour. According to facilities personnel, the boiler operates at its minimum firing rate most of the time. The electric heating is present in the clarifier building. An electric duct heater in a make-up air unit maintains 55 degree air and four electric unit heaters provide general heating. The pre-treatment building has two gas unit heaters and one direct-fired gas makeup air heater. Thermostats are single setpoint electric stats.

Recommendations

- Inspect and recommission /repair/tune-up all heating equipment. Recommissioning will ensure that they operate at their highest possible efficiency.
- Consider replacing the electric heat in the clarifier building with natural gas. It is impossible to know what the exact cost for electric heat is in the clarifier building since it is metered with all other electrical loads, but at current rates, the cost for equivalent heat using natural gas is about \$1.06 per kBtu (assuming 80 percent efficiency) and electric is \$1.75 per kBtu. Using natural gas will reduce the cost for space and makeup air heat in the clarifier building by about 40 percent.

Depot

This building was donated to the town about two months ago. It is a very old building, built around 1881, and, as its name implies, was the depot for the local railroad line that once served the town. Presently, the building is used for community events and meetings. There are offices occupying parts of the first floor and the second floor is the living quarters for the building's caretaker.

Because of its age, the Depot is in need of quite a bit of efficiency improvement. Many of the windows are the original windows and are leaky and inefficient except in the upstairs apartment where new, double pane windows were installed. According to facilities personnel, the roof is uninsulated as well. The foundation is mostly stone and allows high levels of outside air to infiltrate into the building.

The building is heated with electric baseboard heating. Utility bills were not available at the time of this report, but it is safe to assume that winter heating bills are not insignificant. According to the caretaker, the apartment electric bill is under \$40 per month in the summer but exceeds \$130 per month in the winter.

While no detailed analysis was done for energy efficiency upgrades for this building, the following are a few suggestions what the town may consider.

Recommendations

- Seal the building as well as possible. Infiltration of cold air into the building often accounts for over 25 percent of the heating load. Pay attention especially to the foundation sill areas. Weatherstrip existing doors and windows and consider installing "storm" windows as a temporary fix until they can be replaced. (Refer to apartment window upgrades.)
- Install thermal window treatments on windows to improve comfort and reduce heat loss. Initiate the practice of closing them at night.
- Install programmable thermostats.

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- Replace the incandescent lamps in the track and decorative fixtures with 27 watt compact (100 watt equivalent) fluorescents. Do so in the apartment also.
- Relamp and reballast the few 4 foot fluorescent fixtures with T-8 lamps and electronic ballasts.
- According to the caretaker, the domestic hot water system is greatly oversized. Consider replacing the large system with a residential type 30 or 40 gallon heater. Depending on the hot water loads, an instantaneous heater may also be appropriate.
- Consider replacing the electric heat in the building with natural gas. The economic feasibility of this measure may be dependent on whether natural gas is closely available. If (and only if) the town wishes to provide cooling in this building, it would be an excellent candidate for a ground source heat pump system.

Town Street Lighting

Presently, all street lighting in the town is provided by 150 watt incandescent lamps in two fixture types: non-decorative pole mounted down lights that provide side street illumination, and “main street” decorative pole top lights. Not only is incandescent technology the least energy efficient of light sources, their average useful life is one of the shortest, resulting in frequent burn outs. On and off control is mostly done through photo-cell control, however, the pole lights in front of Town Hall are controlled by a time clock which is in need of frequent adjusting as the amount of daylight and darkness varies throughout the year.

According to town personnel, other technologies have been tested in the street lights, but for a number of reasons, were not acceptable to the town. In most municipalities in the U.S., street and area lighting is provided by high efficiency technologies including high pressure sodium (HPS) and metal halide (MH). These differ from incandescent in a couple of ways: both technologies require ballasts to ignite and maintain the lamp, and their appearance is different from incandescent. HPS provides a “warmer” pink/amber light and MH a whiter light. A great advantage of either technology, especially HPS, is their long average rated life; 24,000 hours for HPS and 15,000 hours for MH. Converting to either of these technologies will require replacing the pole top and installing a ballast in the pole. For the side street lights, either technology will require a new fixture to be mounted to the pole. The ballast for this type of fixture is typically integrated into the fixture itself.

Another technology that may be considered, at least for the enclosed decorative main street lights, is compact fluorescents. Replacing incandescents with CFLs is just a matter of screwing the CFL into the existing socket. A concern with CFL technology is that at extremely low temperatures, they may not turn on. However, with the newer electronic ballast improvements in CFLs and the fact that they will be in an enclosed fixture, this may no longer be an issue. This option would be the least cost option to reduce energy use and increase the life of the lamps. Estimated electrical cost savings for 70 watt HPS or MH replacement would be about 33 percent. Using 48 watt CFLs estimated savings would be 68 percent. The CFL option is being implemented as the existing incandescent lamps burn out and need replacement in both the decorative main street lights and the pole mounted lights.

Recommendations

RFP for Energy Performance Contracting Services
Attachment F: Model Technical Energy Audit & Project Development Contract

ATTACHMENT F: Model Technical Energy Audit & Project Proposal Contract

OVERVIEW:

This Contract for Technical Energy Audit & Project Development is the first of two contracts with the selected CONTRACTOR. The CONTRACTOR will complete an investment grade technical energy audit that will include an analysis of each proposed project with projected energy and cost savings and itemized project cost. The CONTRACTOR will also propose terms for the performance contract and present a proposal that includes recommended projects, financing term and projected annual cash-flow analysis. The results of the audit will form the basis for a subsequent Energy Performance Contract.

The complete attachment remains under a separate electronic file for easier use.

RFP for Energy Performance Contracting Services
Attachment G: Model Energy Performance Contract

ATTACHMENT G: Model Energy Performance Contract

OVERVIEW:

This Energy Performance Contract is for design, construction, guarantee, and follow-up monitoring of energy-saving projects. An energy audit was previously completed that identified the costs and savings of each project. The audit provides the basis to develop and negotiate this Energy Performance Contract.

The complete attachment remains under a separate electronic file for easier use.

RFP for Energy Performance Contracting Services

Attachment H: Financing Bid Package

ATTACHMENT H: Financing Bid Package

The complete attachment remains under a separate electronic file for easier use.

OVERVIEW

The CONTRACTOR is expected to conduct a competitive bid process to select a financing firm to satisfaction of Agency.

Table of Contents

Model Request for Proposal for Financing

Lease Contract: *The selected CONTRACTOR will submit a lease-purchase agreement that meets Colorado State Statutes and is approved by Colorado Bond Counsel.*

Financing Proposal Letter

Signature Sheet

Overview of Facility Improvement Projects

Standards for Success

for Energy Performance Contracting

Rebuild Colorado's Services to Ensure Success

To ensure successful Performance Contracting programs in Colorado, the Governor's Office of Energy Management & Conservation's *Rebuild Colorado* program “Standards for Success” and associated free services to provide on-going guidance and support throughout the entire Performance Contracting process.

STEP 1 INTRODUCTORY STAGE

Make sure that performance contracting is right for you.

Rebuild Colorado will: Conduct a telephone screening to determine if you have a potential project; Meet with you on-site visit to present an overview and discuss performance contracting; Prepare an energy engineering study to demonstrate the feasibility of a performance contract in your facilities (identify opportunities, capital cost and energy saving in several buildings).

Get the “Go” Decision

Rebuild Colorado will: Give a presentation to the Board or decision-making group.

STEP 2 RFP STAGE

Set the stage for your project

Rebuild Colorado will: Meet with your legal, procurement, financial and facilities staff to train your evaluation committee; Help establish a broad scope as well as specific requirements for your project to communicate your needs and wishes through the RFP.

Competitively select your energy service company (CONTRACTOR)

Rebuild Colorado will: Provide a Colorado state-approved model RFP; Customize the RFP to meet your project needs; Notify CONTRACTORS to help advertise your RFP; Provide an CONTRACTOR distribution list.

Ensure legislative requirements and industry standards are met

Rebuild Colorado will: Provide the state-approved model RFP that includes references to legislation, standards for Measurement & Verification and other recommended requirements.

Select the CONTRACTOR that's right for you.

Rebuild Colorado will: Train your team in evaluating proposals and in what to expect; Provide an evaluation system and scoring sheets; Serve as an advisor throughout the selection process. *Rebuild Colorado* will remain neutral and unbiased on CONTRACTOR selection and will not be a scoring member of the evaluation committee, but will answer questions and provide clarifications on CONTRACTOR proposals and sit at your side during your CONTRACTOR interviews.

STEP 3 AUDIT STAGE

Before getting started, ensure you and your CONTRACTOR are “on the same page”

Rebuild Colorado will: Meet with you and your CONTRACTOR to review the selected CONTRACTOR's proposal and begin to develop the project so there is clear agreement on intent, CONTRACTOR's proposed services, etc.

RFP for Energy Performance Contracting Services

Attachment I: Rebuild Colorado Standards for Success

Use the Rebuild Colorado Audit Contract to ensure an investment grade audit

Rebuild Colorado will: Provide a Colorado state-approved Audit Contract; Assist in developing and negotiating contract terms; Ensure that terms and expectations set forth in the CONTRACTOR's proposal are incorporated in the contract.

Get ongoing independent reviews during the audit process

*Rebuild Colorado will: Provide an independent review of audit agreement
Ensure that the process set forth in the Audit Contract is followed accurately and that the technical, financial, and legal terms are fulfilled; Review all energy and cost calculations for reasonableness.*

Develop a quality monitoring and verification plan to establish how savings will be determined

Rebuild Colorado will: Review and help develop the monitoring and verification plan; Advise on your final acceptance of the Technical Audit.

STEP 4 PERFORMANCE CONTRACTING STAGE

Use the Rebuild Colorado Energy Performance Contract.

Rebuild Colorado will: Provide a Colorado state-approved model Energy Performance Contract.

Get trained on the energy performance contract prior to signing.

Rebuild Colorado will: Meet with your legal and facilities team to review the general conditions of the contract.

Develop a contract that will stand the test of time

Rebuild Colorado will: Ensure the Performance Contract meets all terms set forth in the Audit and meets all technical, financial, and legal requirements of the state or local government; Assist you in negotiating a contract that meets your needs; Ensure thorough documentation to clearly address future "what-if" questions; Include a third-party independent Contractor to be supported through savings to review annual monitoring and verification reports to.

Develop a final measurement & verification plan

Rebuild Colorado will: Provide Rebuild Colorado's Monitoring and Verification Guidelines that were co-developed with Colorado CONTRACTORS; Assist in developing a mutually acceptable final savings Monitoring and Verification plan and ensure it is incorporated into the Performance Contract.

STEP 5 MONITORING & VERIFICATION STAGE

Get independent reviews of annual energy savings reports

Rebuild Colorado will: Advise on how to get your own expertise for annual independent review of energy savings reports (for small projects under \$500,000 total, Rebuild Colorado will provide the service directly for the first year).

Get ongoing trouble-shooting expertise

Rebuild Colorado will: Provide general technical and performance contracting expertise on an on-call basis when questions arise (Rebuild Colorado will not provide dispute resolution but can help assess if you have grounds for a dispute). .

Rebuild Colorado offers free services on an as-needed, as-available basis to state and local governments. We share the same goal of seeing successful, comprehensive energy and water efficiency improvements in your facilities. Follow these standards to help ensure success!

Standards for Success
for Energy Performance Contracting
Rebuild Colorado's Guidelines for CONTRACTORS

Rebuild Colorado is committed to working with the local industry to ensure high quality projects in Colorado and worked in partnership with Colorado CONTRACTORS to develop the following industry guidelines for Colorado projects.

Contract Documents. *Rebuild Colorado's* RFP, the Technical Energy Audit & Project Proposal Contract and the Energy Performance Contract will be used.

Contract Term. The maximum contract term is 10 years provided the cost-weighted average lifetime of the equipment exceeds the contract term. This maximum term is established for Colorado Political Subdivisions per CRS 29-12.5-101(3)(h). The *ASHRAE Book of Standards* will be used in determining the cost-weighted average useful life of the equipment.

Annual Savings Exceed Annual Costs. Annual savings shall exceed annual payments each and every year while the performance guarantee is in effect. This means that excess savings in other years and interim savings during the construction period will NOT be allocated to meet shortfalls in any year. Annual payments include debt service, Contractor fees, maintenance services, monitoring services, and other services. This is required for Colorado Political Subdivisions per CRS 29-12.5-101(3)(b).

Annual Guaranteed Cost Savings. An annual contractual guarantee will be provided for the first three years of the contract, however, the guarantee shall be made available as a continued option for each subsequent year of the contract term. The Agency can cancel the guarantee at any time after the required period. The guarantee must provide for the sum of identified cost savings to equal or exceed the amount of the annual payment, where annual payment equals lease plus monitoring & verification fee plus required service, each and every year while the guarantee is in effect. This is required for Colorado Political Subdivisions per CRS 12-5-101(3)(a-c).

Interim Savings during Construction Period. Savings accrued during the construction period will not be allocated to the annual savings of any year. See "Annual Savings Exceed Annual Costs" above.

Excess Savings (beyond the guaranteed amount). Excess savings will be retained by Agency and will not be allocated to shortfalls in savings in other years. See "Annual Savings Exceed Annual Costs" above.

Use of Stated Cost Markups. The individual cost markups disclosed in the proposal will be used in both the Technical Energy Audit and the Energy Performance Contract, provided the size and scope of the project remain similar. Cost markups presented in the proposal can be negotiated downward.

Open Book Pricing. Open book pricing is required, such that the CONTRACTOR will fully disclose all costs, including all costs of subcontractors and vendors. CONTRACTOR will maintain cost accounting records on authorized work performed under actual costs for labor and material, or other basis requiring accounting records. CONTRACTOR will provide access to records and preserve them for a period of three (3) years after final payment. Stated cost markups will be clearly applied.

RFP for Energy Performance Contracting Services

Attachment I: Rebuild Colorado Standards for Success

Contingency. Any unused contingency cost will NOT be retained by the CONTRACTOR and will be applied to the project.

Equipment Compatibility or Standardization. All equipment installed that is comparable to similar equipment at the facilities, shall offer compatibility with existing systems, and/or be of the same manufacturer for standardization of equipment agency-wide, unless excepted by Agency.

Annual Appropriations. Annual payment is subject to annual appropriations. This is required of all Colorado state and local governments.

Inflation and Escalation Rates. Any inflation rates will be pre-approved by Agency.

Energy Escalation Rates. Where the annual lease-purchase payments are set-up to escalate each year in anticipation of annually escalating energy cost savings, a calculator will be used to determine the maximum value as developed by the US Department of Energy for energy saving performance contracts in its Federal Energy Management Program. The tool is on-line at:
<http://www.eere.energy.gov/femp/techassist/softwaretools/softwaretools.html> (EERC).

Monitoring and Verification Plan. A monitoring and verification plan will be developed per guidelines in the RFP and the model energy performance contract.

Independent Review of Monitoring & Verification. The energy performance contract must provide for a portion of the guaranteed savings for Agency to contract with an independent monitoring & verification specialist to provide an independent review of the CONTRACTOR's monitoring & verification plans and reporting. This is estimated to be 10 percent of the CONTRACTORs monitoring & verification costs.

_____ (name of CONTRACTOR) agrees to abide by the above "Standards for Success" and to apply all legislated requirements and support the Agency in adopting all other standards.

CONTRACTOR Signature